

What is claimed is:

1. A method of producing coronary vasodilation without peripheral vasodilation comprising administering at least 10 µg of at least one A_{2A} receptor agonist to a human.
- 5 2. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount that does not exceed about 1000 µg.
3. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount ranging from about 10 to about 600 µg.
4. The method of claim 1 wherein the A_{2A} receptor agonist is administered in a
10 single dose.
5. The method of claim 1 wherein the A_{2A} receptor agonist is administered by iv bolus.
6. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount ranging from about 0.05 to about 60 µg/kg and wherein the A_{2A} receptor agonist is
15 administered by iv bolus.
7. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount ranging from about 0.1 to about 30 µg/kg wherein the A_{2A} receptor agonist is administered by iv bolus.
8. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an
20 amount no greater than about 20 µg/kg to a supine patient and wherein the A_{2A} receptor agonist is administered by iv bolus.
9. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount no greater than about 10 µg/kg to a standing patient wherein the A_{2A} receptor agonist is administered by iv bolus.
- 25 10. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount ranging from about 10 to about 600 µg wherein the A_{2A} receptor agonist is administered in about 20 seconds.
11. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount ranging from about 10 to about 600 µg wherein the A_{2A} receptor agonist is
30 administered in less than about 10 seconds.

12. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount greater than about 100 µg.

13. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount no greater than 600 µ.

5 14. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount no greater than 500 µg.

15. The method of claim 1 wherein the A_{2A} receptor agonist is administered in an amount ranging from about 100 µg to about 500 µg.

10 16. The method of claim 1 wherein the A_{2A} receptor agonist is selected from the group consisting of CVT-3033, CVT-3146 and combinations thereof.

17. A method of myocardial perfusion imaging of a human, comprising administering a radionuclide and a A_{2A} receptor agonist to the human wherein the myocardium is examined for areas of insufficient blood flow following administration of the radionuclide and the A_{2A} receptor agonist.

15 18. The method of claim 17 wherein the myocardium examination begins within about 1 minute from the time the A_{2A} receptor agonist is administered.

19. The method of claim 17 wherein the administration of the A_{2A} receptor agonist causes at least a 2.5 fold increase in coronary blood flow.

20 20. The method of claim 17 wherein the administration of the A_{2A} receptor agonist causes at least a 2.5 fold increase in coronary blood flow that is achieved within about 1 minute from the administration of the A_{2A} receptor agonist.

21. The method of claim 17 wherein the radionuclide and the A_{2A} receptor agonist are administered separately.

22. The method of claim 17 wherein the radionuclide and the A_{2A} receptor agonist are administered simultaneously.

23. The method of claim 17 wherein the administration of the A_{2A} receptor agonist causes at least a 2.5 fold increase in coronary blood flow for less than about 5 minutes.

24. The method of claim 17 wherein the administration of the A_{2A} receptor agonist causes at least a 2.5 fold increase in coronary blood flow for less than about 3 minutes.

30 25. The method of claim 17 wherein the A_{2A} receptor agonist is CVT-3146 which is administered in an amount ranging from about 10 to about 600 µg in a single iv bolus.

26. The method of claim 25 wherein CVT-3146 is administered in an amount ranging from about 100 to about 500 µg in a single iv bolus.

27. The method of claim 17 wherein the a A_{2A} receptor agonist is CVT-3146 which is administered in a single dose in an amount ranging from 10 to about 600 µg that is
5 independent of the weight of the human being dosed.

28. The method of claim 27 wherein the dose is administered in about 30 seconds or less.

29. The method of claim 27 wherein the dose is administered in about 20 seconds or less.

10 30. The method of claim 17 wherein the A_{2A} receptor agonist is administered in a single dose.